

E. J. PACAUD.

Watch.

No. 168,774.

Patented Oct. 11, 1875.

Fig. 1

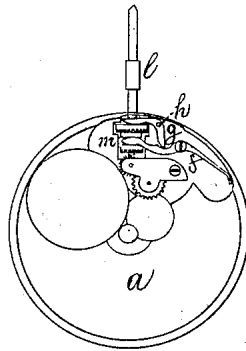


Fig. 2

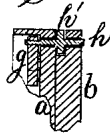


Fig. 4

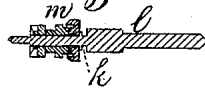
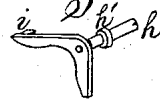


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

EUGENE J. PACAUD, OF SCHAFFHAUSEN, SWITZERLAND, ASSIGNOR TO
FLORENTINE A. JONES, OF SAME PLACE.

IMPROVEMENT IN WATCHES.

Specification forming part of Letters Patent No. 168,774, dated October 11, 1875; application filed
June 30, 1873.

CASE A.

To all whom it may concern:

Be it known that I, EUGENE J. PACAUD, of Schaffhausen, Switzerland, have invented certain Improvements in Watches, of which the following is a specification:

Figure 1 of the accompanying drawings is a front view of my invention. Figs. 2 and 4 are vertical sections, and Fig. 3 is a perspective view of parts, in detail, of the same at an enlarged scale.

The present invention relates to certain new and useful improvements in stem-winding and stem-setting watches, having for their principal object the simplifying and perfecting of the mechanism by which the "Breguet ratchet" of stem-winding watches is shifted to allow the setting of the hands.

My invention consists, mainly, in the means employed for attaching an angle-lever, which acts on the spring-arm of the Breguet ratchet to a watch-case, all of which I will now proceed to describe and point out in my claim.

In the drawings, *a* represents a pillar-plate, and *b* the top plate of a watch. Pivoted to the pillar-plate *a* is a spring-lever, *f*, curved and arranged, as shown, to hold and allow the action of an angle-lever, *g*, turning in the pillar-plate *a* on a fulcrum-screw, *h*, which is formed with a shoulder or flange, *h'*, that rests on the plate *b*.

The angle-lever *g* is formed as shown, and provided at one end with a projecting pin or stem, *i*, Fig. 3, that fits into a groove, *k*, Fig. 4, formed in the winding-arbor *l*, so that when screwed down the screw *h* serves as a fulcrum to the lever *g*, which also holds the winding-arbor *l* in position by means of the pin or stem *i* working in the slot or groove *k* of the winding-arbor *l*, on which is located a Breguet ratchet, *m*.

The operation of my invention is as follows: By drawing out the winding-arbor *l*, in whose groove *k* the stem *i* of the angle-lever *g* works, the angle-lever *g* is brought to bear at one end against the spring-lever *f*, so as to carry the point of the latter inward, and engage the Breguet ratchet *m*, with whose groove the point of the lever engages with the wheel

or pinion operating the hand-setting train; and by pushing in the arbor *l* the pin or stem *i* is brought to bear on it so as to actuate the lever-arm *g*, and reverse the action of the spring-lever *f*, and allow the Breguet ratchet *m* to go back to its original position, so as to disconnect it from the hand-setting train, and allow the movement of the arbor *l* for the winding operation.

By the above description, reference being had to the accompanying drawings, it will be seen that the angle-lever *g*, being formed, as shown, with its stem *i* and fulcrum-screw *h*, serves the double purpose of the usual yoke, for retaining the winding-arbor in place, and of the shifting-lever for operating the shifting of the Breguet ratchet. The movement, being thus simplified, is, therefore, more economical, and less liable to displacement than the ordinary methods in use.

Moreover, by the formation of the fulcrum-screw *h* with its flange *h'* a double bearing is secured, the end shake is easily regulated, and the fulcrum or angle-lever *g* is held rigidly in place, so as to serve as one piece with the screw *h*. Besides, by the arrangement of the flange *h'*, when the screw *h* is unscrewed it raises the angle-lever *g* out of the groove *k* of the winding-arbor *l*, thus allowing the latter to be withdrawn and replaced without disturbing the hands or dial.

The screw *h* is threaded only at its inner end, where it passes through the angle-lever, the threaded portion being of less diameter than the plain or smooth portion, as shown in Fig. 2; hence, when the screw is turned in one direction it brings the lever into its place, and when turned in the opposite direction it automatically forces the lever from its place, thus disengaging the lever from the stem, and enabling both to be removed. The pin *i* of the angle-lever *g*, engaging with the groove *k* of the winding-arbor, prevents the latter from being withdrawn from the watch until the angle-lever is loosened. The screw *h* of the angle-lever, therefore, holds both the lever and the winding-arbor.

Having thus fully described my improve-

ments, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The screw *h*, threaded at its inner end, and provided with the flange *h'*, the latter being located between the dial and top plate of a watch, in combination with the elbow-lever *g*, substantially as described, and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUGENE J. PACAUD.

Witnesses:

F. A. JONES,

S. F. M. BYERS.